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ABSTRACT

In summer 2000, the University of Alaska Anchorage and cooperating professional development schools organized four summer institutes to enhance teachers' cultural and subject matter knowledge. This dual focus was prompted by the new Alaska Content Standards and by guidelines for preparing culturally responsive teachers, developed by Alaska Native organizations. Each 2-week institute focused on a specific subject--science, mathematics, English/language arts, or social studies--as it related to the integrated theme of subsistence, and was taught in a rural Native village or a predominantly Native "hub town." Participants engaged in experiential learning activities, including learning from Native elders and other community members about traditional Native knowledge related to the subject matter. A culminating workshop brought all participants together to begin developing integrated curriculum units for the next school year. A qualitative study of the institutes' impact on teachers' learning and classroom practices combined naturalistic inquiry during the institutes and follow-up interviews with 16 of the 33 participants. The four institutes varied considerably in extent of participants' exposure to Native culture, but all institutes succeeded in creating communities of learners. Teacher interviews were analyzed in terms of three facets of culturally relevant teaching: social relations, conceptions of self and others, and conceptions of knowledge. All participants reported an expanded understanding of their subject matter. However, only teachers in the village institutes, who experienced cultural immersion in local Native contexts, made substantial changes in their classroom practices and approaches to Native students. (Contains 16 references.) (SV)

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The Tundra is the Text: Using Alaska Native Contexts to Promote Cultural Relevancy in Teacher Professional Development

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Paper Presented at the Annual Meeting of the American Educational Research Association New Orleans, 2002

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Introduction

Improving K-12 student learning to meet the challenges called for by higher standards is much on the mind of school districts, principals, teachers, and the university faculty who work closely with them. As these educational practitioners consider together how to provide intellectually challenging and culturally relevant opportunities for all students to learn to these higher expectations they must confront the issue of teacher subject matter knowledge. Recent research has clearly shown a positive connection between teachers' subject matter knowledge and student learning (see e.g. Ferguson, 1991; Monk, 1994; Mullens, Murnane, & Willett, 1996). However, such research has also shown that many teachers do not have the depth of understanding of the subject-matter that can enable them to develop the powerful learning experiences necessary to help students meet the standards. This issue is made even more complex when we consider what exactly teachers' depth of subject-matter knowledge means in the context of working with students from diverse cultural backgrounds. Moreover, teachers are more and more challenged by learning theories that suggest that subject matter knowledge is best learned by students in relevant and engaging contexts that integrate often disparate subject areas (Beane, 1997). What, then, do teachers need to know about their subject-matter to teach in a culturally responsive way that supports academic achievement for all

their students? What sort of professional development can support this kind of teacher and student learning?

Conceptual Framework

If we want K-12 students to have richer and more stimulating learning opportunities that can improve their achievement, then we need to consider carefully the learning and continued development of their teachers. Professional development is a crucial component in educational reform, and is critical to ensuring that teachers can help students meet the learning challenges of higher standards. Although the "cognitive revolution" and the last decade of research on knowledge, thinking, and learning have begun to inform best practices for K-12 student learning, the same cannot necessarily be said with respect to teacher learning. Traditional professional development practices of the "make-and-take" or the "one-shot" inoculation model of inservice programs that typically treat teaching as the simple accumulation of techniques are still common. Proponents of sustained, in-depth, subject-matter inquiry, and constructivist-oriented teaching and learning for students only infrequently recommend and support similar learning opportunities for teachers. Yet, research on promising professional development practices clearly shows that it is just these sorts of practices that assist teachers in making meaningful changes in their practice.

The parameters of effective professional development for teachers are not unknown. The literature and research on professional development is consistent in specifying the characteristics of high-quality experiences that have great potential for improving teaching and learning. Teachers should have choice, ownership, opportunities for collaboration, active engagement, reflection, sustained support, and a primary focus on content and pedagogy (Darling-Hammond, 1997; Fullan, 1991; Lieberman & Miller, 1991; National Staff Development Council, 1995).

Borko and Putnam (1995) identified three characteristics that exemplify successful professional development efforts. First, such programs attend carefully to the substance of the professional development and are based on the assumption that fundamental change in teaching requires growth in teachers' conceptions of the subject-matter, pedagogy, and subject-specific pedagogy (p. 58). Successful programs also ensure that the teaching and learning process of the professional development sessions reflect those that are advocated for use in classrooms with students. That is, the assumptions about how teachers learn are compatible with the assumptions about how K-12 students learn. Finally, these programs attend to the teachers' prior knowledge and beliefs and their effect on learning and subsequent classroom action. They take into account that teachers will filter new knowledge through their existing frameworks of knowledge and

beliefs and that this will in turn influence how the teachers make sense of the new knowledge and recommended practices.

While successful professional development programs seem to share these common characteristics, they are not limited in their formats (Putnam & Borko, 2000). Some projects ground teacher learning in their own practice by centering activities within the school site, while others organize on-going workshops where teachers bring experiences and issues from their classrooms to inform the content and process of the professional development. Yet another format, one particularly well suited to those projects concerned with helping teachers think in fundamentally new ways, are professional development opportunities that engage teachers in learning in settings other than school buildings. As Putnam and Borko (2000) point out, this format can allow teachers the opportunity to experience subject matter learning in new and different contexts that can allow them to "break set" and move beyond conceiving of the content within the confines of the narrow, traditional "school version" of the subject-matter.

Furthermore, by helping teachers "break set" these non-school contexts for learning may provide more opportunities for teachers to build broader conceptions of the substance of the subject matter, including knowledge drawn from diverse cultural groups. In this way, such formats can offer greater potential for helping teachers develop a more culturally responsive pedagogical repertoire. Studies have shown that effective teaching

for culturally, ethnically, and linguistically diverse students rests in pedagogical practices that reflect students' cultural communication patterns, group interaction style, and socio-historical knowledge and experiences (e.g. Cazden & Leggett, 1981; Ladson-Billings, 1995; Mohatt & Erickson, 1981; Villegas, 1988). Ladson-Billings (1995) argues that such culturally responsive pedagogy, what she calls culturally relevant teaching, rests on three pillars of practice: 1) teacher's conception of self and others; 2), social relations in the classroom and extensions to the community, and; 3) teacher's conceptions of knowledge.

Teachers who engage in culturally relevant teaching believe that all students are capable of academic success, and have a sense of efficacy at teaching all students. They pay attention to the social relationships among students within their classroom and encourage a "community of learners" in which students are encouraged to learn collaboratively, teach each other, and take responsibility for each other. These teachers understand knowledge in ways very different from the traditional, static conception that predominates school classrooms. Rather, they believe that knowledge must be viewed critically and from multiple perspectives, and so it must draw from a wide array of cultural heritage and sources of knowledge. Teachers who engage in culturally relevant pedagogy use students' culture as the foundation of learning in order to maintain it and to transcend the traditional school curriculum, which has generally omitted or distorted the history, culture, and background of the non-dominate culture groups. They assist students

in making connections between their community, national, and global identities and so use students' cultural referents to impart knowledge, skills, and attitudes. In this way, teachers help students not only build bridges between their natal cultural knowledge and the curriculum of the school, but they make the learning and understanding of cultural knowledge a curriculum focus in its own right.

Professional development is the key to improving this bridge-building. As teachers attain greater mastery of subject matter and greater facility in using subject matter in integrated and relevant pedagogy, their sense of efficacy increases. This strengthening of professional competence leads to greater student learning (Berman & McLaughlin, 1978).

The Alaska Context: Professional development for culturally responsive teaching

The Alaska Partnership for Teacher Enhancement (APTE) was formed in 1999 with a Title II grant from U.S. DOE. APTE is a collaborative that includes the University of Alaska Anchorage, four high-needs school districts, the Alaska Department of Education and Early Development, the Anchorage Education Association, and General Communications, Inc. It is focused on improving K-12 teaching and learning and enhancing preservice and inservice teacher education and learning. The collaborative work includes the creation of Professional Development Schools and focused teacher professional development opportunities. Beginning in the summer of 2000, faculty from

the university and the PDS schools organized and began offering four subject matter institutes designed to address the dual concern of enhancing teachers' cultural and subject matter knowledge.

The impetus for this dual focus was the expressed concern by the partners in the project to assist teachers in meeting the challenges of teaching to the newly established expectations of the *Alaska Content Standards*, and to do so in a manner that was consistent with the *Guidelines for Preparing Culturally Responsive Teachers for Alaska's Schools*. These guidelines are a unique facet of the professional development context in Alaska, as few states have been so explicit and public about distinguishing the professional knowledge, skills, and dispositions that comprise a culturally responsive teacher.

The guidelines were developed as a collaborative effort among a large number of cultural and political groups representing Alaska Natives, using the *Alaska Teacher Standards* as the framework. The *Alaska Teacher Standards* focus on eight core professional constructs: philosophy, learning theory and practice, diversity, content, instruction and assessment, learning environment, family and community involvement, and professional growth. The culturally responsive guidelines build on this framework by including specific indicators that reflect the "enhanced knowledge and skills that culturally responsive teachers need above and beyond the performance indicators

stipulated by the State" (Alaska Native Knowledge Network, p. 2). Examples of these indicators include that teachers should:

- develop a philosophy of education that is able to accommodate multiple world views, values, and belief systems, including attention to the interconnectedness of the human, natural and spiritual worlds as reflected in Alaska Native societies;
- incorporate alternative ways of knowing in their teaching practice and understand that similarities and differences between them, particularly with regard to the intermingling of Alaska Native and Western traditions;
- acquire and apply a full repertoire of skills for the appropriate us of experiential approaches to learning in their teaching practices;
- engage in extended experiences that involve the development of observation and listening skills associated with the traditional learning ways of Native people;
- understanding the significance of the role of cultural identity in providing a strong foundation for all social, emotional, intellectual and spiritual development and demonstrate the ability to build on that understanding in their teaching;

- help their students to understand and compare different notions of cultural diversity from within and beyond their won community and cultural region, including factors that come into play within culturally mixed and blended families;
- demonstrate a recognition that many and various cultural traditions from throughout the world, including Alaska Native, have contributed to the knowledge base reflected in the Alaska Content Standards;
- construct learning environments in the classroom context that are modeled on natural learning environments in the community;
- effectively utilize the local community as an extension of the classroom learning environment;
- effectively identify and utilize the resources and expertise in the surrounding community to enhance the learning opportunity of the students;
- develop partnerships with parents, Elders, school board members and other community representatives as co-teachers in all aspects of their curricular and instructional planning and implementation, and arrange for appropriate recognition for such contributions;

- participate in, contribute to and learn from local community events and activities in culturally appropriate ways.

Furthermore, the guidelines include recommendations for what and how teachers should learn in order to develop a culturally responsive teaching practice. They suggest that teachers be provided first-hand experiences and learning opportunities in alternative ways of knowing and that they learn from Elders and others who are themselves grounded in ways of knowing that are different from those typically used in schooling.

These guidelines and recommendations, as well as the principles of practice for effective professional development identified by Borko and Putnam (1995), formed the conceptual framework for the partnership's professional development efforts. To this end, the summer institutes were established with the intent of engaging teachers in learning subject-matter content in the unique context of a rural Alaska Native village as a means of assisting them in developing a more culturally responsive teaching practice, including a more dynamic view of knowledge and expanded ways of knowing. The goal was for participants to gain a more complex knowledge base and dynamic understanding of the concepts, principles, and modes of inquiry in the disciplines, built on relevant local examples drawn from Alaska Native village life. Furthermore, the institute leaders were asked to engage teacher participants in learning activities that were experientially based, and include learning from local Native Elders and other community members about

traditional Native knowledge within the context of the subject-matter. For the 2000-2001 institutes, two other elements were added: the use of a theme across the subject-matter institutes, and an Integrated Curriculum Institute. During this culminating workshop, all the participants would be brought together to collaboratively begin the development of integrated curriculum units to implement in their schools during the next school year

Each two-week institute focused on specific subject-matter , either science, mathematics, English/language arts, and social studies as it related to the integrated theme of "subsistence." The instructors were asked to select content, materials, and learning experiences that would support participant learning in relation to this theme. The subject-matter institutes were taught on-site in rural Alaska Native villages within our partnership school districts. The English/Language Arts and the Mathematics Institutes, as well as the culminating Integrated Curriculum Institute, were conducted in a larger town with a population of approximately 4600, the regional transportation and service hub for the area. Although it has a larger population base, the town is nevertheless approximately ninety percent Alaska Native. The other two institutes, Science and History/Social Studies, took place in smaller Native villages in the region. One of these villages has a population of about 800, while the other is about 450. In both these villages the Native population is 96-99 percent. Like the vast majority of Native villages in Alaska all of theses sites are accessible only by plane or boat.

Conducting the Study

Through our investigation of this project we hoped to better understand the aspects of professional development that foster the development of a culturally relevant teaching practice by looking closely at what teachers learned in the institutes, and how they then translated this learning to their classrooms. To illuminate these issues we used a qualitative research design that combined naturalistic inquiry during the institutes, with follow-up interviews with a subset of the participants.

The primary researcher in this study took the role of moderate, participant-observer during the History/Social Studies Institute and the culminating Integrated Institute. In this role a researcher "seeks to maintain a balance between being an insider and an outsider, between participation and observation" (Spradley, 1980, p. 60). As a participant-observer she was on the initial design team for the institutes, and the planning team for the History/Studies Institute. She attended the first five days of the History/Social Studies Institute and engaged in all the activities along side the participants. During the institute, when an activity lent itself to concurrent observation and note taking, she did so. At other times, when she felt the obvious note taking would be disruptive, or might cause a participant to feel self-conscious, she chose to simply participate in the activity and observe and develop her field notes as soon thereafter as possible. At the Integrated Institute, she assumed a less participatory role, opting instead

to listen and observe as the teacher participants engaged in curriculum planning. In both settings she collected handouts or other material given to participants, and engaged in on-going, informal, field-based interviews, or dialogues with the participants. The second researcher in this study was the instructor of the Integrated Institute. He did not engage in any data collection during the institutes. Rather, he joined the primary researcher in the follow-up data collection that consisted of interviews with participants.

A total of thirty-three teachers and teacher aides from the APTE partnership school districts participated in the professional development project, and were fairly evenly distributed across the four subject-matter institutes. Furthermore, all of the institutes included teachers of Alaska Native heritage and those from non-Native backgrounds. The majority of the teachers and teacher aides worked in one of the eight Professional Development Schools within the partnership network. For the follow-up interviews we decided to focus on the teachers and aides in three of the PDSs, one rural elementary, one urban elementary, and one urban middle school. These three schools were selected because they had been PDSs since the inception of the partnership and had a high participation rate in the summer institutes. From the three schools we were able to interview all ten of the participating teachers from the two urban sites, and six of the eight participating teachers and teachers aides from the rural site. Of the six participants from the rural site three were teacher aides. Among the teachers interviewed six were

Alaska Native women, two were White males, seven were White females, and one was a Japanese-American female.

Data collected for this study include observations from the History/Social Studies Institute and the Integrated Institute, field notes from these settings, handouts and other documents and artifacts from each of the institutes, field-based interviews with participants, and follow-up interviews with the selected teachers. The initial analysis of the data was grounded in the data using an inductive method. Each of the researchers read through the data looking for patterns and themes across two dimensions: teacher learning in the institutes and the translation of this learning to the teachers' classroom practice. Once these themes were established we examined them in light of the three facets of culturally relevant teaching described by Ladson-Billings (1995): conception of self and others; social relations in the classroom and extensions to the community; and, conceptions of knowledge. We elected to use Ladson-Billing's conceptual framework of culturally relevant teaching as an external analytic lens for two reasons. First, it is a framework that has become widely accepted in the field and thus allows us to situate our findings from this study within the larger scope of research in this area. The second reason rests on our belief that this framework reflects similar philosophical and epistemological assumptions about teaching practice and knowledge found in the *Guidelines for Preparing Culturally Responsive Teachers for Alaska's Schools.*

Findings

The findings from the data are presented here using the three facets of culturally relevant teaching as the analytic framework. For each of these three facets, social relations, conceptions of self and others, and conceptions of knowledge, we present data on the teacher learning within the institutes coupled with data from how the teachers are translating this learning to their classrooms. We do this to highlight the connections between teacher learning from professional development and the resulting P-12 student's opportunities to learn. However, before turning to this data, we examine the teachers' opportunities to learn as they actually played out, which is not necessarily how they were originally conceptualized.

Translating professional development goals into opportunities to learn

Overwhelmingly, the structure and organization of the subject-matter institutes reflected the three principles of effective practices for professional development outlined by Borko and Putnam (1995). Each institute was carefully focused on a specific aspect of subject-matter content as reflected in both national and state content standards, and the instructors explicitly attended to and engaged the teachers in examining their prior knowledge and beliefs about the subject-matter, teaching, and learning. However, while the teaching and learning processes used in the institutes were more reflective of those advocated for use in classrooms with students, and thus met the third principle described

by Borko and Putnam, they were not necessarily reflective of culturally relevant teaching practices and learning processes.

As mentioned previously, to achieve the goals of the professional development project, the summer institutes were held in rural Alaska Native villages. This was done to facilitate teachers' learning in this unique context in hopes that it would help them "break set" and move beyond conceiving of subject-matter content within the confines of the narrow, tradition "school version." The project directors believed that moving the institutes to the villages could provide an increased opportunity for experiential learning, a way of learning more in keeping with Alaska Native culture, and would make it more likely that participants would work with Elders and others within the village community. However, these desired opportunities to learn for the participants were not universally present across the four subject-matter institutes. Each institute showed varying attention to, and integration of, the concept of learners as socio-cultural beings, Native ways of knowing and learning, including experiential learning, and learning from Elders or others in the Native community. This variation ranged from little explicit attention to these issues in the Mathematics Institute, to a full immersion in the life and culture of the village, including daily engagement with local Elders, in the History/Social Studies Institute. In fact the History/Social Studies Institute would be best characterized as an immersion experience, as this quote from one of the urban teachers suggests:

I felt that we were totally immersed in the culture of the [Native] people. Because of that, I felt that our class went that way too. It wasn't a traditional Western culture class. It honored Native ways of knowing and doing.

Between these two extremes was the English/Language Arts Institute in which the participants read literature written by and about Alaska Natives, engaged in traditional literary analysis using these texts, and wrote and shared their responses to the readings. Although the participants had the opportunity to work with an Alaska Native educator who specializes in Native literature, their learning about Native ways of knowing and learning, such as oral storytelling, was framed more as an academic topic to be studied, than as a means of constructing knowledge and understanding in its own right. On the other hand, the Science Institute focused on learning about the local environment through inquiry. Participants had the opportunity to learn about local flora and fauna using the learning cycle, a model of learning science within the Western academic tradition, as well as working with Elders and other Native members of the community to learn from their observations and accumulated knowledge of the local tundra.

So, while all of the institutes were conducted in the context of a Native Alaska village, not all of the learning used that context as the basis for learning experiences. In this respect, the summer institutes were much like schools with varying degrees of culturally relevant teaching and learning present. As one might assume, and the data

confirm, these different degrees of culturally relevant opportunities for teaching and learning in the summer institutes led to different learning outcomes for the teacher participants with respect to their development of a culturally relevant teaching repertoire.

While each institute did not embody all facets of culturally relevant pedagogy, all institutes did each reflect at least one fundamental and necessary characteristic of culturally relevant teaching, namely the attention to developing a community of learners.

Attending to relationships: Communities of learners in classrooms and beyond

Teachers across all four of the institutes commented positively on the learning environment that the instructors fostered among the group. This was particularly important given that within each of the institutes there were both Alaska Native teachers and teacher aides, and non-Native teachers. The participants spoke about the importance of this learning community in many ways. Some talked of it as "bonding" with colleagues, and spoke of a "community forming among the teachers." Others appreciated the opportunity to "discuss solutions to [math] problems," to get "feedback and new ideas from each other," and having the time to "collaborate." Many of the participants, especially the non-Native teachers, wrote about the importance of the diverse perspectives, examples, and interpretations that were shared within the group. The positive aspect of the community of learners was perhaps best captured by one of the male, elementary teachers. He believed that the institute had contributed to his learning

because the instructors and his colleagues "constantly valued me as a learner. Being cared for, listened to, allows you to actually move forward."

While teachers in all of the institutes commented on the importance of the community of learners among the participants and the instructors, those from the science and history/social studies institutes construed their community more broadly. These participants had regular and meaningful interactions with Elders and other people within the Native community. All seventeen of the participants in these institutes made comments on their final evaluations for the institutes about the importance of the "time spent with Elders, and community members" for their learning. They appreciated the opportunity to learn from the Elders, to "gain from their wisdom," and the "free advice and laughter" they had shared with the participants.

The teachers translated their experiences with learning communities to their teaching practices in many ways. Most of the teachers in the follow up interviews shared how they were focusing more on developing a positive, collaborative environment in their classroom among the students, and their more explicit attention to learning about their students as unique individuals. For example, one of the Alaska Native teachers at the rural site who participated in the English/Language Arts Institute has begun using the writing process, giving special attention to peer response. She spoke of being excited by the conversations the students were having about their ideas, the seriousness with which

they take their responsibility to help each other improve, and the positive effects she was seeing on student writing. Like others who attended the History/Social Studies Institute, a middle school teacher who teaches Spanish is using "Talking Circles," a time for reflective conversations about learning, with her classes as a means of engaging them in dialog and meaning-making about Spanish language and culture. She also said she was trying to "move myself from the center" of the learning and give the students more voice in the teaching and learning process.

While most of the teachers we interviewed talked about paying more attention to the social relationships within their classroom, a few have gone beyond the school walls to broaden their learning community. Two of the urban elementary teachers who participated in the History/Social Studies Institute and three of the Alaska Native teachers from the rural elementary have either brought Elders, grandparents or parents into the classroom as teachers and learning resources. Moreover, four other teachers from the urban schools are actively planning for more engaged learning within the community. The middle school science teacher wrote a grant with her students and next year they will be creating plaques to accompany plants in a nearby park. In collaboration with local Native Elders, and others from the diverse cultural communities in the local area, the students will develop captions for the plaques which give the traditional and cultural uses of the plants, and will be written in English, Spanish, and one of the Alaska Native

languages. Her colleague, a social studies teacher, is planning now for a project next year in which students from his classes will conduct oral histories with residents of a nearby retirement center. He explained that he wants his students to learn from these folks who are "Elders" from the many diverse cultural communities in the city. It is noteworthy that the urban teachers who are actively expanding, or seeking ways to expand, their learning community all had these same types of opportunities to learn during the summer institutes. As one of them explained, "Being out in [the village] brought in the need to have authentic speakers come in...It's opened me up to using the resources that are right here in the room. That has been inspired by being out there."

Relationships and transformation: Developing one's conceptions of self and others

Understanding one's self as a socio-cultural being, and in turn understanding others in this same light, is a key characteristic of teachers who engage in culturally relevant teaching. Furthermore, attending to the development of P-12 students' cultural identity is a hallmark of these teachers' practice. One avenue for cultivating and nurturing the development of cultural identity is to assist individuals in examining their own beliefs, values, and ways of knowing the world. This process is supported though facilitated experiences where learners can examine cultural issues by considering differences and similarities between their own cultures and other cultures. As mentioned,

the participants in the institutes had varying degrees of this type of facilitated cultural experiences from which to examine their socio-cultural conceptions of self and others.

The teacher responses across the institutes indicate that on this dimension, there was a noticeable difference in learning between those who had meaningful interaction with Elders and community members, and those who did not. For example, in the English/Language Arts Institute the participants read widely from selections written by and about Alaska Natives. They engaged in conversations about culture, and the role of subsistence within an Alaska Native cultural context. And while they had a singular opportunity to visit a local subsistence fish camp, it did not include active participation. It was merely a visit to observe. Participants in this institute wrote and spoke about the importance of hearing the Native perspective, and getting a better understanding of the culture, but did not make any reference to their own perspective or culture. There was no data to indicate any critical examination of their beliefs, worldviews, or cultural lenses.

However, these sorts of comments all but leapt from the data from the participants in the Science and, especially, the History/Social Studies Institutes. At the end of the Science Institute, one of the participants wrote, " My experiences in the village have forever effected my opinions of subsistence and my values." Comments such as these were nearly universal across this data set. These sorts of comments remained prevalent during the interviews as well, such as when another participant from the Science Institute

spoke about "coming back totally changed." She felt the experience helped one "become more sensitive to the world around you because the people out there [participants and local community folks] are more tolerant, open to new ideas, and different ways of knowing." A number of the participants in the History/Social Studies Institute used the word "transformed" to explain their experience, both in their written evaluations at the end of the institute, and four months later during the follow-up interviews. An elementary participant wrote after the institute, "I understand values, traditions…. I have moved from appreciation to understanding (emphasis in original)."

One of the urban middle school teachers captured his sense of transformation in understanding issues of culture, and the role of culture in human identity. He said that he believed that experiencing other cultures and ways of life helped him understand his own culture and beliefs. He shared that the key nugget of learning from this experience was, "The better I understand myself, the better educator I believe I am." His comment seems to capture what many of the teachers in these two institutes were learning, that culture matters in one's sense of self, and that self-knowing is fundamental to all other aspects of learning and growth as a human being.

Most of the teachers in these two institutes took this learning to heart and are practicing it in their classroom. They are continuing to develop their own and their student's conceptions of self and others. This is evident in the ways they are expanding

their student's access to resources and people in the community, as mentioned previously, in the new ways they are relating with their Alaska Native students and families, and by the different teaching and learning strategies they are using.

One reflection of a more culturally relevant sense of others is the way that one interacts with them and is able to see the world through their lenses and worldviews. Teachers from the two village institutes seem to have begun developing new ways of relating with their Alaska Native students and families. The following comments from some of these teachers are illustrative of this new sensibility:

> I'll start conversations with Alaska Natives by saying, you know, what's your village? Where do you go in the summer? I do that with parents and with students all over the school. There are several students around the building that I would probably have nodded to or visited with during the year. But now I'm building up a little more of a rapport with, because they're telling me where they're from…I think I've had a good rapport, a caring rapport, but now I have more of a knowing one.

> When I think of the Native children that I've taught, it takes them a little longer to get out what they want to say, but they always have a lot of meaning. They don't just use words idly. Every word they use is so purposeful. They don't just talk.

> And you have to be patient to do that. Many of these children in our classrooms have been raised by elders in our community and that's the style of communication that they are familiar with. And my experience in [the village] has helped me to understand that I need to listen to them and be patient.

> I understand that when we have Native students come to our school, the transition is often very difficult for them. Until I had gone out to a village and really experienced how they live, with no running water and the smallness of the community, just the shock, the cultural shock of them coming to Anchorage in a large school, the cars even, the transportation's different out there, what they eat is different...My experience in the village creates a connection with students. If I hadn't gone out to the village... I can talk about the smokehouse... it's a bonding. I had one student bond with me right away because I could talk about it, I'd had the experience. Just reading about it in a book isn't good enough.

Another aspect of how these teachers are translating their summer learning into opportunities for students to expand their concept of self and others is through introducing new strategies. The middle school science teacher, for example, has been giving more explicit attention to having students share their home knowledge, and cultural community knowledge. In the botany unit she developed this fall, she had

students share about plants that they or their families use as medicine. She shared with them not only traditional Japanese knowledge of medicinal plants she had learned from her grandmother, but also what she had learned during the summer about Yup'ik use of plants. She explained the student reaction, saying, "When I opened the door to non-traditional ways of learning and knowing, not just the textbook information, it validated to kids the experiences and knowledge of others, including their families. I let them know that this home knowledge is important and it gives ideas to the scientific framework."

Down the hallway, her colleague who teaches Spanish is using photographs from the institute of the village, Elders, and local environment as prompts for quick writes. The students write dialog or descriptions for the pictures. She explained her use of the pictures this way:

> Stereotypes can develop because of lack of information. Because of negative role models in these kids' lives and examples of how other people have treated Native peoples. So that they just expect that is normal. And when another person, me, finds it beneficial to make a color transparency of a picture from [the village], you know, a picture is worth a thousand words.

We see in these teachers' practice how they are making connections between culture, identity, students' conception of themselves and others, and the content and

process of the curriculum. These connections, then, bring us to the last facet of culturally responsive teaching, an expanded and more dynamic conception of knowledge.

Content and Process: Expanding conceptions of subject-matter knowledge and ways of knowing

Across each of the institutes, participants self-reported that they had an expanded understanding of the subject-matter and the teaching of that subject-matter as a consequence of their participation. They noted that the institutes focused their learning on subject-matter that was drawn from the state and national content standards, and provided them opportunities to learn using new, or innovative strategies that many had never experienced before. This was as true for participants in the Mathematics Institute as it was for those in the History/Social Studies Institute.

Participants in the Mathematics Institute engaged in learning focused on data analysis and measurement. Many of the elementary teachers who participated wrote in their final evaluation that they had learned specific models for representing data, had a "better sense of how to engage students in working in groups," and had more appreciation for the "importance of getting students to explain their thinking." Similarly, participants in the English/Language Arts Institute wrote about their expanded understanding of dialog and analysis of text, the use of writing as a avenue for learning, and were pleased that the reading selection provided them with new resources to use with students in their

classrooms. A few went even farther with this notion of expanded resources, to say that they would seek to "include examples of the literature of other cultures," or, "integrat[e] the local culture, especially through story." And, in the follow-up interviews urban teachers from both of these institutes talked about how they had incorporated resources or some of the strategies used in the institute in their teaching. A few said they were drawing on information they had learned about Alaska Native culture and trying to include it more within their curriculum. However, the Alaska Native teachers from these institutes were drawing extensively from their institute experiences with respect to resources, strategies, as well as their local community culture.

The teachers in the Science and History/Social Studies Institutes also thought their experiences had expanded their subject-matter knowledge, had been connected to important state and national content standards, and had incorporated diverse models of teaching. In fact, one of the Alaska Native teachers in the rural school shared during the interview how her participation in the Science Institute had helped her fill in some of her gaps in content knowledge and given her more confidence to teach science. She said she had always found science abstract and she could never predict what would happen when she tried teaching it to her students. But, she said, "the hands-on activities of the institute were very helpful. Also, I never knew how to ask good questions, questions that make you wonder. I know how to do that now." Although it takes her a great deal of

preparation time, she is doing it and "not leaving it [science] for others to teach." This sense of expanded subject-matter knowledge was also reflected in the comments from one of the urban teachers:

> For professional development, it was huge, I felt, for me personally. I can add so much more to my classroom. I have more in my background knowledge now to be able to pull from.

While the teachers in these two institutes clearly expanded their subject-matter knowledge, their comments also include descriptions of how they engaged actively with Native ways of knowing and learning. The participants in both of these institutes talked about how they focused more on careful observation and listening through their interactions with the Elders. As one of the science participants explained, "it is very clear out there that observation is survival, you have to observe the environment. It is an important way of learning and knowing." Other participants similarly shared learning through observations, including an episode when the instructor, an Alaska Native, showed the participants the next step in making a tool, but then did not demonstrate the step again. Rather, he ensured that at least one of the participants had the process down, and then required that he demonstrate for others who were ready for that next step. They, then, in turn were to demonstrate the step to help those who needed it. In each case, the learner observed and then demonstrated their knowledge of the skill. This was a learning

event that the participants commented on during the institute, as well as after as an illustration of Native ways of teaching and learning.

A participant in the History/Social Studies Institute highlighted the importance of talking and sharing ideas, and careful listening within Alaska Native cultures. Her comments on this subject also illuminate the difference in how a story unfolds as compared to Western tradition:

> The circle time was very meaningful. The Elders would share. We'd all come together. We'd sit quietly for a long time. Then we would wait for someone, anyone, to start.... One of the things I learned from that was when it was the Elder's turn to speak, sometimes we didn't have any idea where they were going with that story. Their stories could go on for a very long time. After listening through a couple of circles, I realized that when their stories started somewhere, they'd go full circle, right back to where they started. And they had this amazing way of bringing it all together. You had to listen and pay very close attention. So, one of the things that happened for me was that I really learned to listen more carefully. It was worth waiting for.

Many of the participants from this institute commented on the fact that as learners, they had had to listen more carefully. They also mentioned that they learned to take more care with what they said.

Finally, an important aspect of the learning mentioned by participants in the History/Social Studies Institute was the use of experiential learning and the opportunity for the learners to explore their environment in less structured ways. They were given some control over how they went about learning and how they used the time allotted for this learning. Many of the non-Native teachers commented on this as a positive aspect of their learning.

So, what has all this meant for their teaching? How have they translated their learning experiences to the classroom? The teachers who participated in these two institutes seem to have experienced a significant shift in how they work with students. All but one of the teachers from these institutes that we interviewed shared examples from their classroom of teaching and learning activities that indicate they were dealing differently with both the content of knowledge and ways of knowing.

One change that nearly all of the urban teachers mentioned was the use of time. All of the middle school teachers interviewed talked about "slowing down" and giving the students more time to develop their ideas and understandings, but also using more checks for understanding and feedback. As one of them explained, "In [the village] they never expect for kids to be perfect the first time they do something. They give them the chance to do it over and over again to learn it. But, they were brutally honest about feedback." Some of this "slowing down" also has to do with the inclusion of more

opportunities for students to talk, to share their ideas, and to develop their understandings through conversation and dialog.

Two of the urban elementary teachers also said they were thinking differently about their use of time, including how to "make time more flexible." One of them said she had really taken a different approach to how she organized the day:

> First thing in the morning, I used to be really structured right from the get-go. Now, in the morning, one of the things I've started this year is a morning message, where children read the message on the board. It is a way for them to get started on their day.... I'm giving them a lot more time to do their own thing than I ever have before.... Every minute of the day is not dictated by what I have planned for them. There are options.

All of the rural and urban teachers we interviewed from these two institutes shared how their teaching had shifted with respect to what knowledge is included in their classrooms, and in their teaching. They are all incorporating more content knowledge about Alaska Native culture, as well as traditional knowledge drawn from those cultures, and from other cultures when appropriate. The rural participants have each taught some aspect of subsistence life and local culture, from traditional rituals of first catch, to traditional knowledge of the local animal and plant life. They report including this type of local knowledge more frequently in their teaching, and getting positive responses from

the students. The urban teachers also report teaching content specifically about subsistence and other aspects of Alaska Native culture within their classes.

This point of expanded knowledge and understanding is perhaps best illustrated by one of the urban elementary teachers who participated in the History/Social Studies Institute. He teaches 3rd grade which includes social studies curriculum on Native Alaska cultures, and an expected trip to the local museum. This year he felt he was better able to utilize this experiential learning opportunity because of his summer experience:

> I specifically asked not to have a docent. I did the talk for the class. And, I knew what we were covering. And the whole management of the class problem went away. And it gave me the chance to say, the last thirty minutes of the class, you guys can just go, where the docents would have held them the whole time through and they wouldn't just get to cruise. That was something I wouldn't have done hadn't I been out there. I would always defer to the docent's knowledge, their expertise. But, they don't know exactly what's going on in the classroom. It was really cool for me to do it, a lot better.

Lessons Learned

Through this study we sought to illuminate how professional development situated in Alaska Native contexts can assist teachers in developing a more culturally relevant practice. What are the powerful and necessary processes and content that help

this happen? What the data makes clear is that immersion in local Native contexts was a crucial element in the experience. It was this immersion that most fundamentally effected teachers and supported their enactment of culturally relevant practices when they returned to their classrooms. The teachers who attended the village institutes made substantial changes in their approaches to Native students as well as in their classroom practices. Although not always visible in discrete lesson plans and units, many culturally responsive practices have found their way into these teachers' repertoires. Those who attended the institutes in the hub town did not show such substantial change in their practice. It seems that the degree of classroom impact depends upon the degree of immersion in the culture.

Thus, an important lesson learned is that it takes a truly authentic experience to engender changes in cultural understandings and practices. If we want teachers to "break set," then we must make the learning setting sufficiently different from their usual learning context. This is how we interpret the success of the village experiences as opposed to the hub town experiences.

An important implication of this finding is that the people who develop and teach the professional development need to be culturally relevant teachers themselves. Otherwise the approach may well remain at the "foods and festivals" level of cultural awareness with no real impact upon participants.

Where do these culturally relevant institute leaders come from? In the model of this project under study, the findings suggest that pairing subject-matter specialists with "culture-bearers" such as Elders or other local Alaska Natives may be a fruitful direction. Together, the co-instructors might plan, teach, and learn from each other.

Another lesson learned is related to the importance of providing professional development activities that are authentic, integrated, and developed from an interactive learning community. Just as such projects are crucial to establishing a culturally relevant climate for students in diverse classrooms, so too are they important to use with teachers to foster the pedagogical content knowledge needed to implement such classroom practices. In all of the institutes, the establishment of a learning community focused on meaningful activities that applied subject matter knowledge was highly valued by the participants. In follow-up interviews, new understandings about subject matter were articulated in terms of making schoolwork relevant to the real world of students. Units and lessons that were developed in the Integrated Curriculum Institute and implemented in the classrooms during the school year showed a marked attention to involving students in making choices about investigating real-life issues and problems through the use of subject matter knowledge. This focus for the summer institutes proved to have made an impact in classroom instruction.

Many participants did suggest that the delivery of the authentic nature of the institutes would be improved if the Integrated Curriculum Institute were not held separately at the end of the content institutes. Instead, planning for authentic integrated classroom instruction could be included in each institute. In the upcoming summer institutes, this will be the approach.

Finally, the complexity of teacher professional development must be acknowledged, particularly when the goal is to help teachers understand other cultures and use authentic contexts for the teaching of rigorous content knowledge. Ladson-Billings' framework includes three facets: teacher's conception of self and others, social relations in the classroom and extensions to the community, and teacher's conceptions of knowledge. No one of these is sufficient in and of itself. All three matter and need to be considered and attended to as a unit. We believe that the tripartitite strategy of using immersion in authentic cultural settings, integrated curriculum approaches, and co-instruction with subject-matter specialists and "culture-bearers" shows great promise in addressing all of these elements.

Conclusion

Current trends in educational reform are aimed at assisting students to reach higher and more rigorous learning outcomes. Often missing from this educational dialogue is the corresponding issue of teacher knowledge and support for teacher

continued development. Yet, it is clear that what teachers know and are able to do with respect to their subject matter, pedagogy, and subject-specific pedagogy matters greatly to their students' learning and academic achievement. This matter is even more pressing when one considers the growing population of students in schools who represent diverse cultural groups.

How do we help teachers develop a repertoire of subject matter knowledge and practice that allows them to support the learning of all their students? Research is only now beginning to help us develop a robust understanding of how teachers acquire and develop this knowledge, and then utilize it to benefit the learning of their students. While findings from this study add generally to this growing body of literature by carefully examining teacher learning and the effects on curriculum, it also illuminates new issues and considerations. Unlike many teacher professional development programs that either focus on subject matter as more traditionally conceived, or on generalized teaching strategies for culturally relevant teaching, the program highlighted in this study attempted to pay attention to both simultaneously. It is unique in its attention to the socio-cultural context of subject-matter learning, and its attention to including Native knowledge within the domain of the subject-matter.

The findings from the study show the importance that must be placed upon developing professional development experiences that use authentic settings and

activities, local people of different cultures, and collaborative leadership. Immersion in a culture is essential in order to achieve a significant impact in the beliefs and practices of the participants.

It is important to note that the project discussed in this study is supported by grant funding. The expense of conducting professional development activities in off-site authentic settings is considerable. Unless funding is provided for such professional development through "hard money" sources, such rich experiences will remain the exception to the rule for teacher learning. If we are to truly address helping teachers improve the cultural relevancy of their instruction, policy makers must provide ongoing funding.

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